FIG. 1

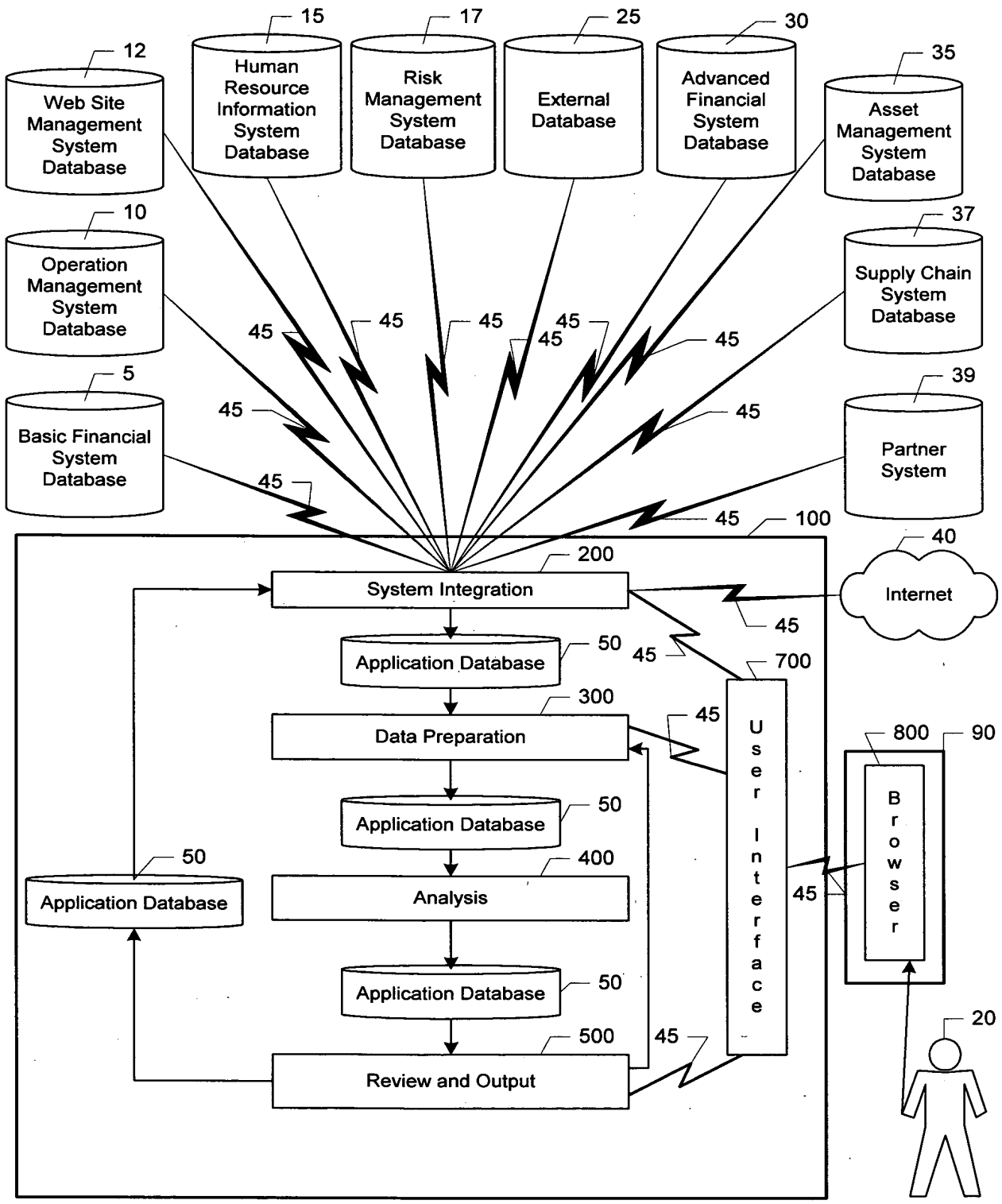

12
Web Site Management System Database
15
Human Resource Information System Database
17
Risk Management System Database
25
External Database
30
Advanced Financial System Database
35
Asset Management System Database
10
Operation Management System Database
37
Supply Chain System Database
5
Basic Financial System Database
39
Partner System
45
100
40
Internet
200
System Integration
50
Application Database
700
300
Data Preparation
User Interface
800
90
Browser
400
Analysis
500
Review and Output
20

FIG. 2

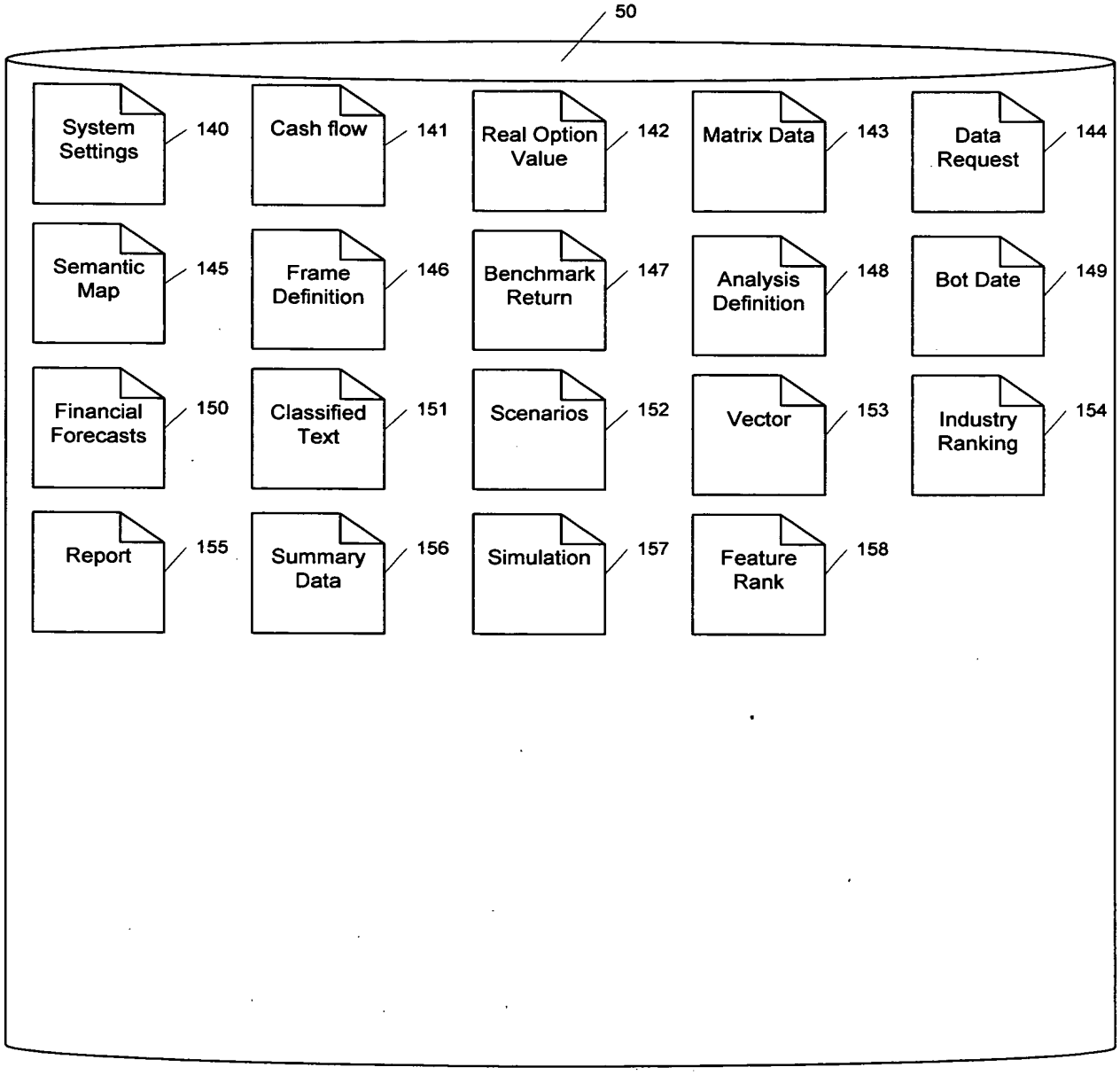
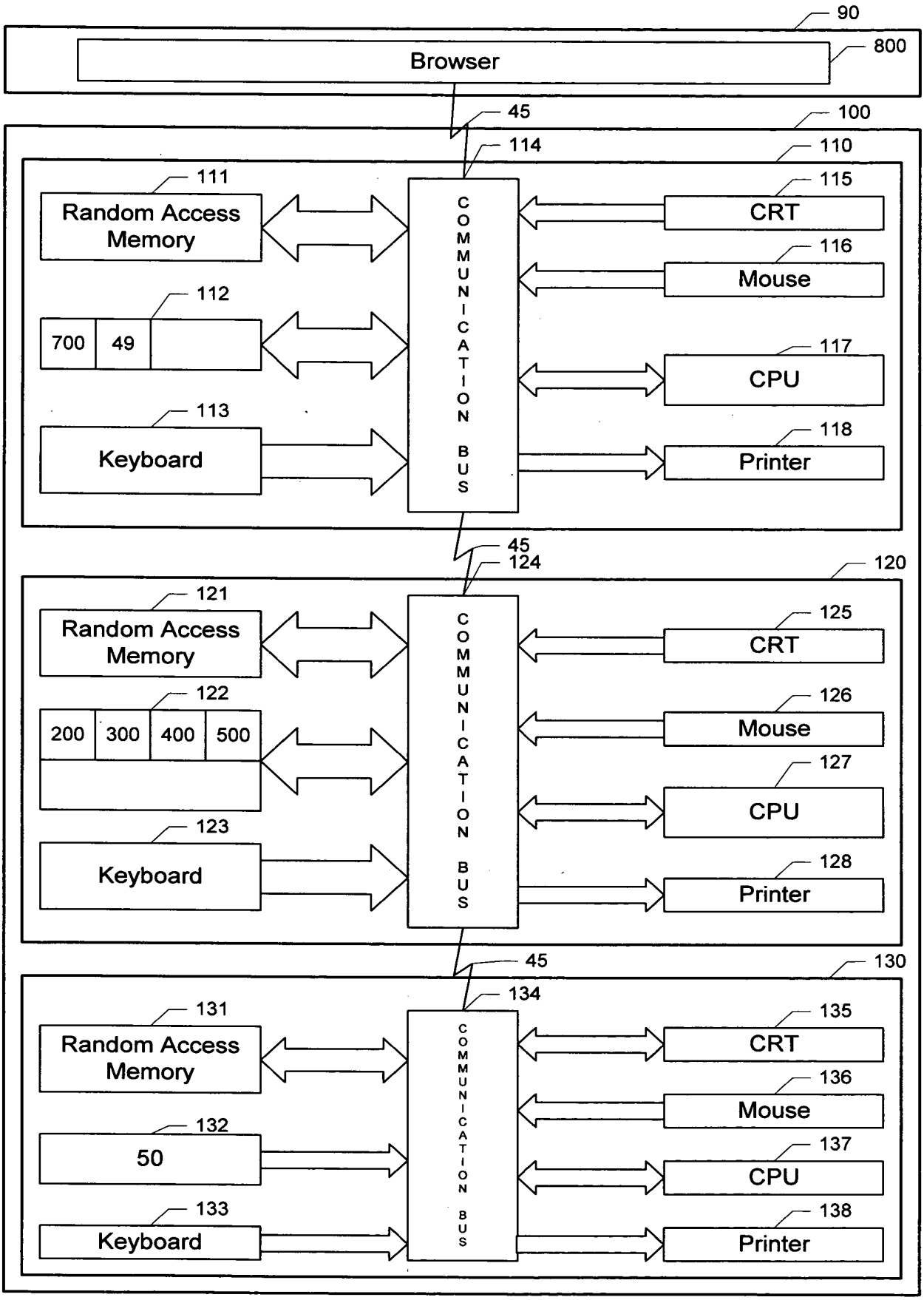

50
System Settings
140
Cash flow
141
Real Option Value
142
Matrix Data
143
Data Request
144
Semantic Map
145
Frame Definition
146
Benchmark Return
147
Analysis Definition
148
Bot Date
149
Financial Forecasts
150
Classified Text
151
Scenarios
152
Vector
153
Industry Ranking
154
Report
155
Summary Data
156
Simulation
157
Feature Rank
158

FIG. 3


90
Browser
800
45
100
114
110
111
Random Access Memory
112
700
49
113
Keyboard
COMMUNICATION BUS
115
CRT
116
Mouse
117
CPU
118
Printer
45
124
120
121
Random Access Memory
122
200
300
400
500
123
Keyboard
COMMUNICATION BUS
125
CRT
126
Mouse
127
CPU
128
Printer
45
130
134
131
Random Access Memory
132
50
133
Keyboard
COMMUNICATION BUS
135
CRT
136
Mouse
137
CPU
138
Printer

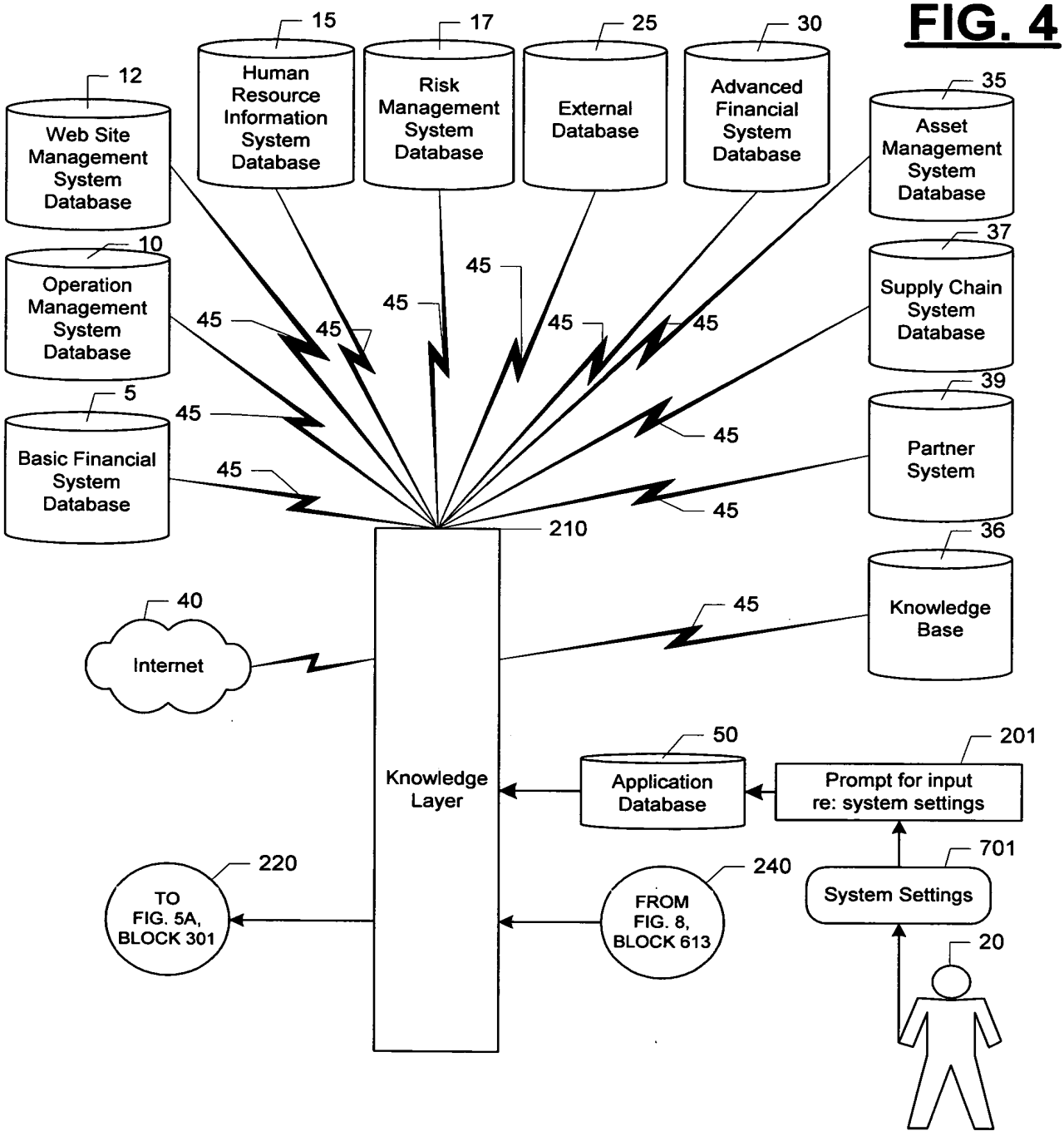


FIG. 4
15
Human Resource Information System Database
17
Risk Management System Database
25
External Database
30
Advanced Financial System Database
12
Web Site Management System Database
35
Asset Management System Database
10
Operation Management System Database
37
Supply Chain System Database
5
Basic Financial System Database
39
Partner System
45
210
36
Knowledge Base
40
Internet
Knowledge Layer
50
Application Database
201
Prompt for input re: system settings
701
System Settings
20
220
TO FIG. 5A, BLOCK 301
240
FROM FIG. 8, BLOCK 613

FIG. 5A

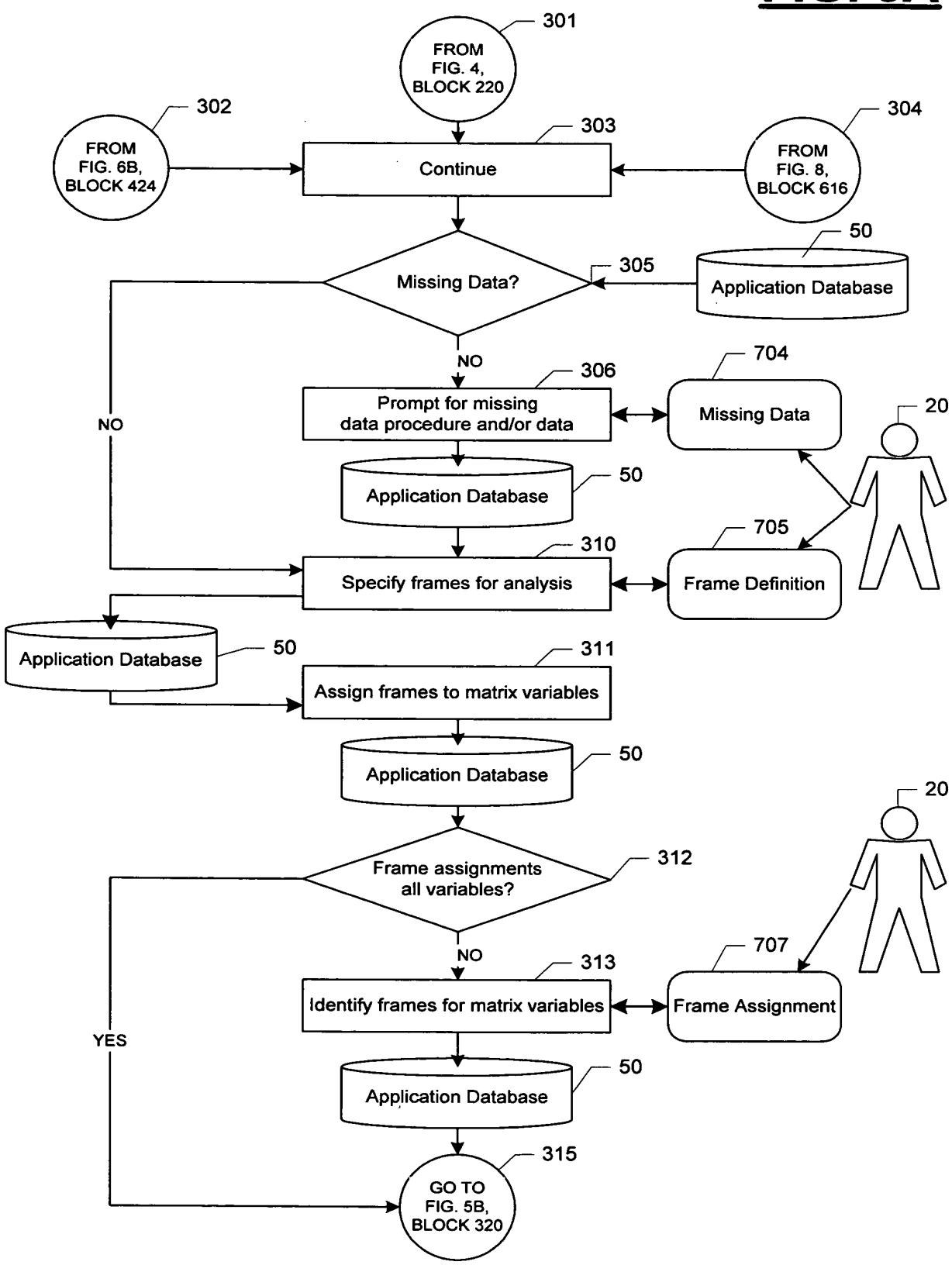
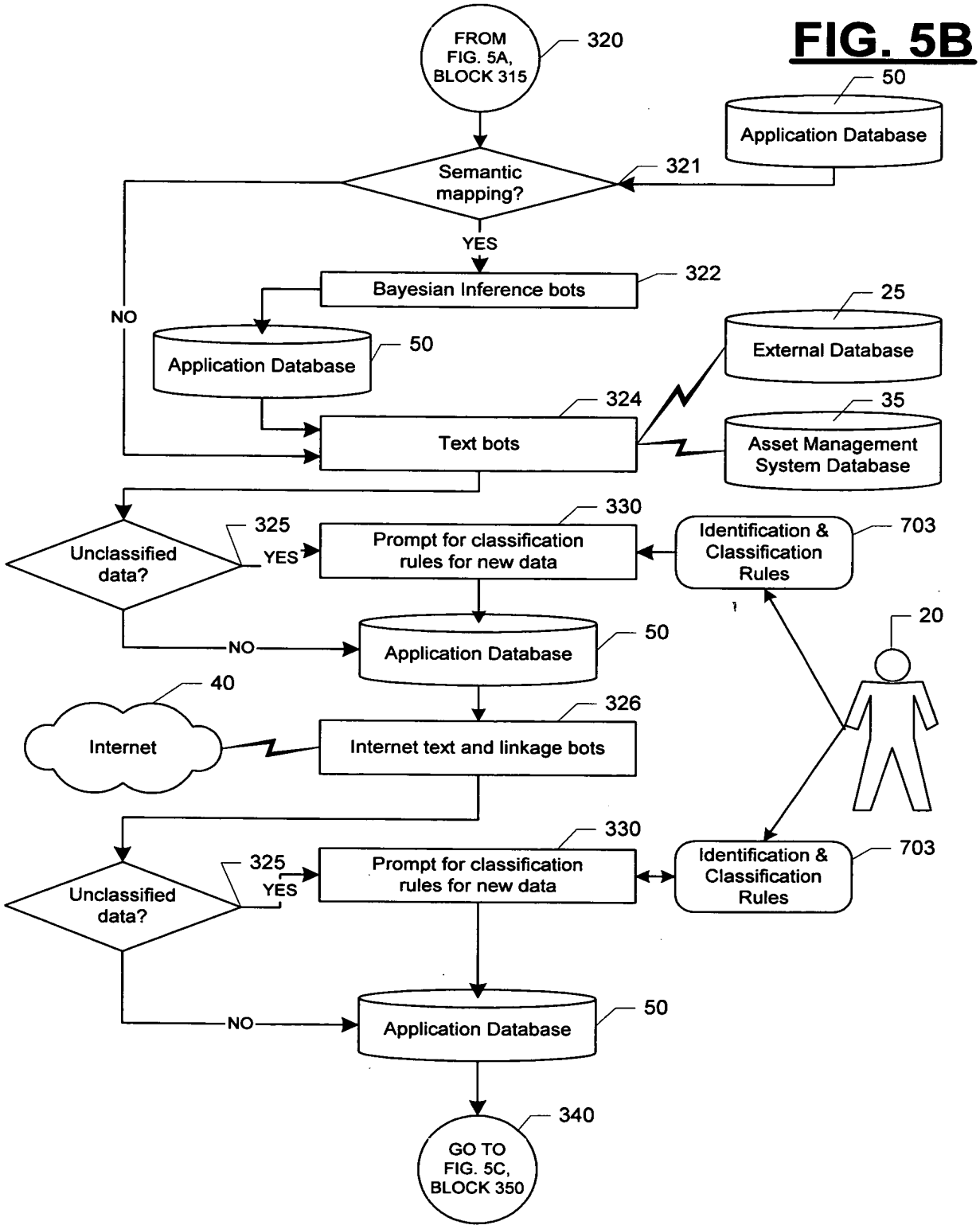

301
FROM FIG. 4, BLOCK 220
302
FROM FIG. 6B, BLOCK 424
303
Continue
304
FROM FIG. 8, BLOCK 616
50
Application Database
305
Missing Data?
NO
306
Prompt for missing data procedure and/or data
704
Missing Data
20
NO
50
Application Database
705
310
Specify frames for analysis
Frame Definition
50
Application Database
311
Assign frames to matrix variables
50
Application Database
20
312
Frame assignments all variables?
NO
707
313
Identify frames for matrix variables
Frame Assignment
YES
50
Application Database
315
GO TO FIG. 5B, BLOCK 320

FIG. 5B


FROM FIG. 5A, BLOCK 315
320
50
Application Database
Semantic mapping?
321
YES
NO
Bayesian Inference bots
322
25
External Database
Application Database
50
324
35
Text bots
Asset Management System Database
330
325
Unclassified data?
YES
Prompt for classification rules for new data
Identification & Classification Rules
703
NO
Application Database
50
20
40
Internet
326
Internet text and linkage bots
330
325
Unclassified data?
YES
Prompt for classification rules for new data
Identification & Classification Rules
703
NO
Application Database
50
340
GO TO FIG. 5C, BLOCK 350

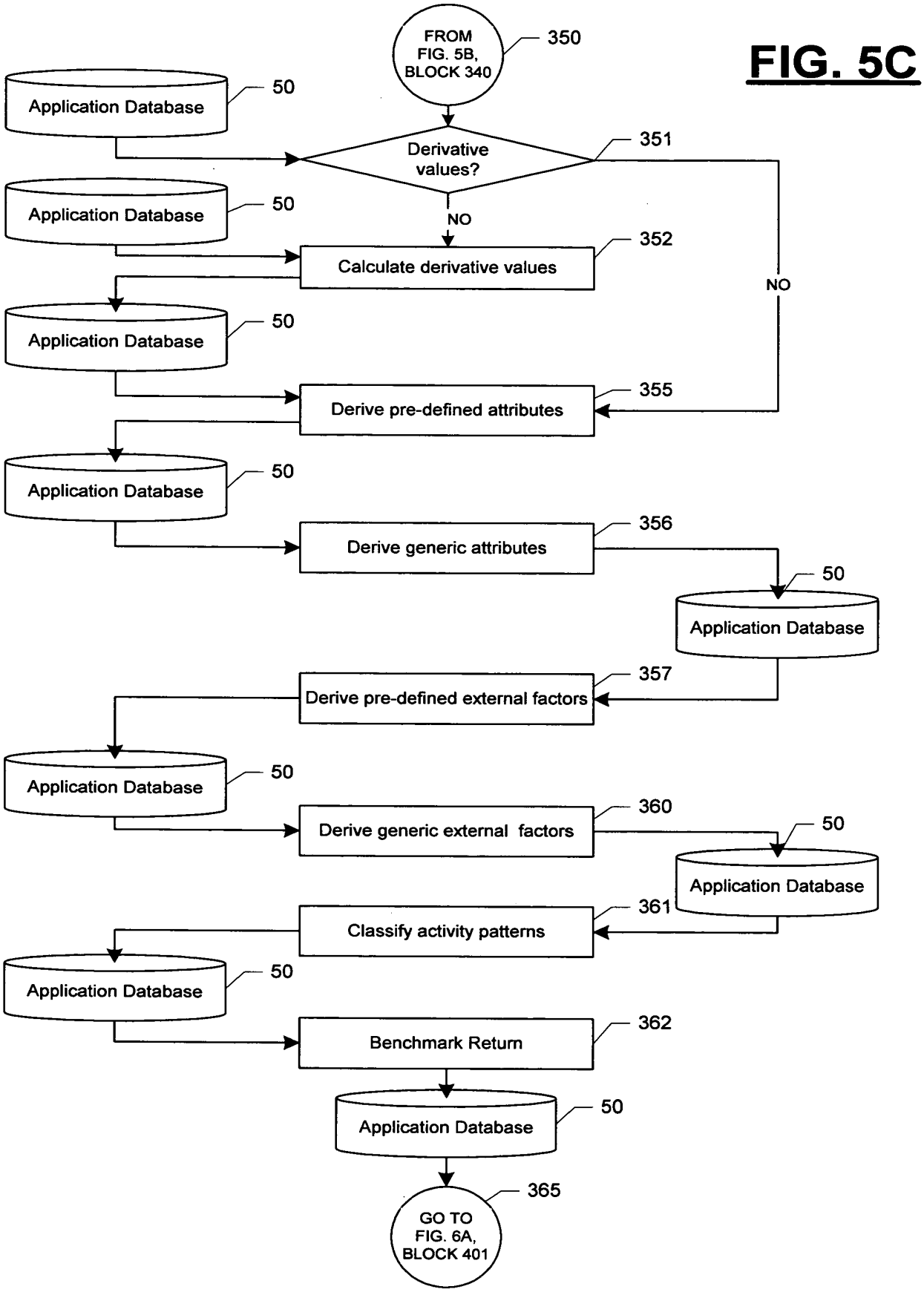

FROM FIG. 5B, BLOCK 340
350
Application Database
50
Derivative values?
351
NO
Calculate derivative values
352
Derive pre-defined attributes
355
Derive generic attributes
356
Derive pre-defined external factors
357
Derive generic external factors
360
Classify activity patterns
361
Benchmark Return
362
GO TO FIG. 6A, BLOCK 401
365

FIG. 5C

FIG. 6A

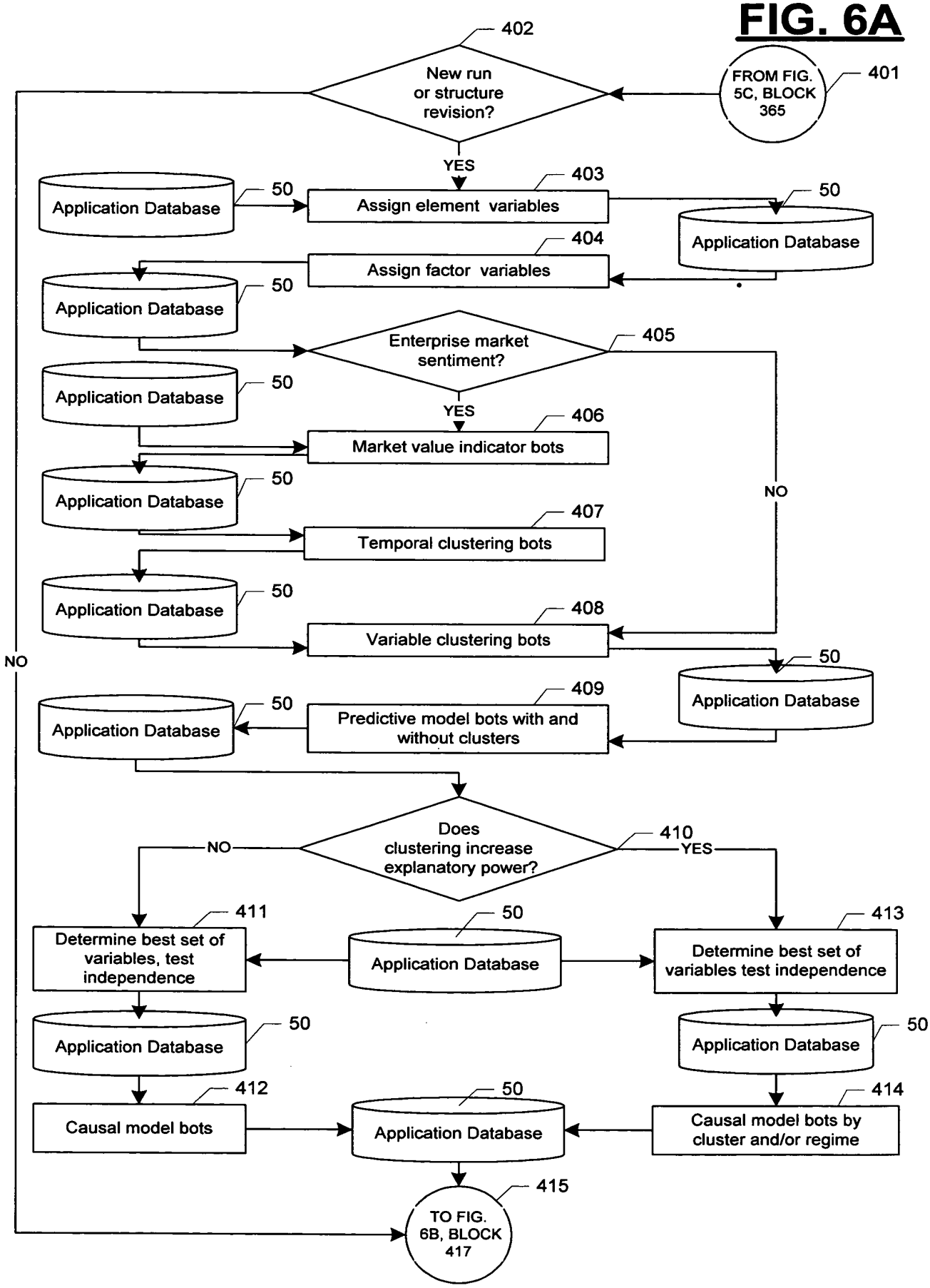

402
New run or structure revision?
FROM FIG. 5C, BLOCK 365
401
YES
Application Database
50
403
Assign element variables
50
Application Database
404
Assign factor variables
Application Database
50
Enterprise market sentiment?
405
Application Database
50
YES
406
Market value indicator bots
Application Database
50
NO
407
Temporal clustering bots
Application Database
50
408
Variable clustering bots
NO
50
Application Database
Application Database
50
409
Predictive model bots with and without clusters
Does clustering increase explanatory power?
410
NO
YES
411
Determine best set of variables, test independence
50
Application Database
413
Determine best set of variables test independence
Application Database
50
Application Database
50
412
Causal model bots
50
Application Database
414
Causal model bots by cluster and/or regime
415
TO FIG. 6B, BLOCK 417

FIG. 6B

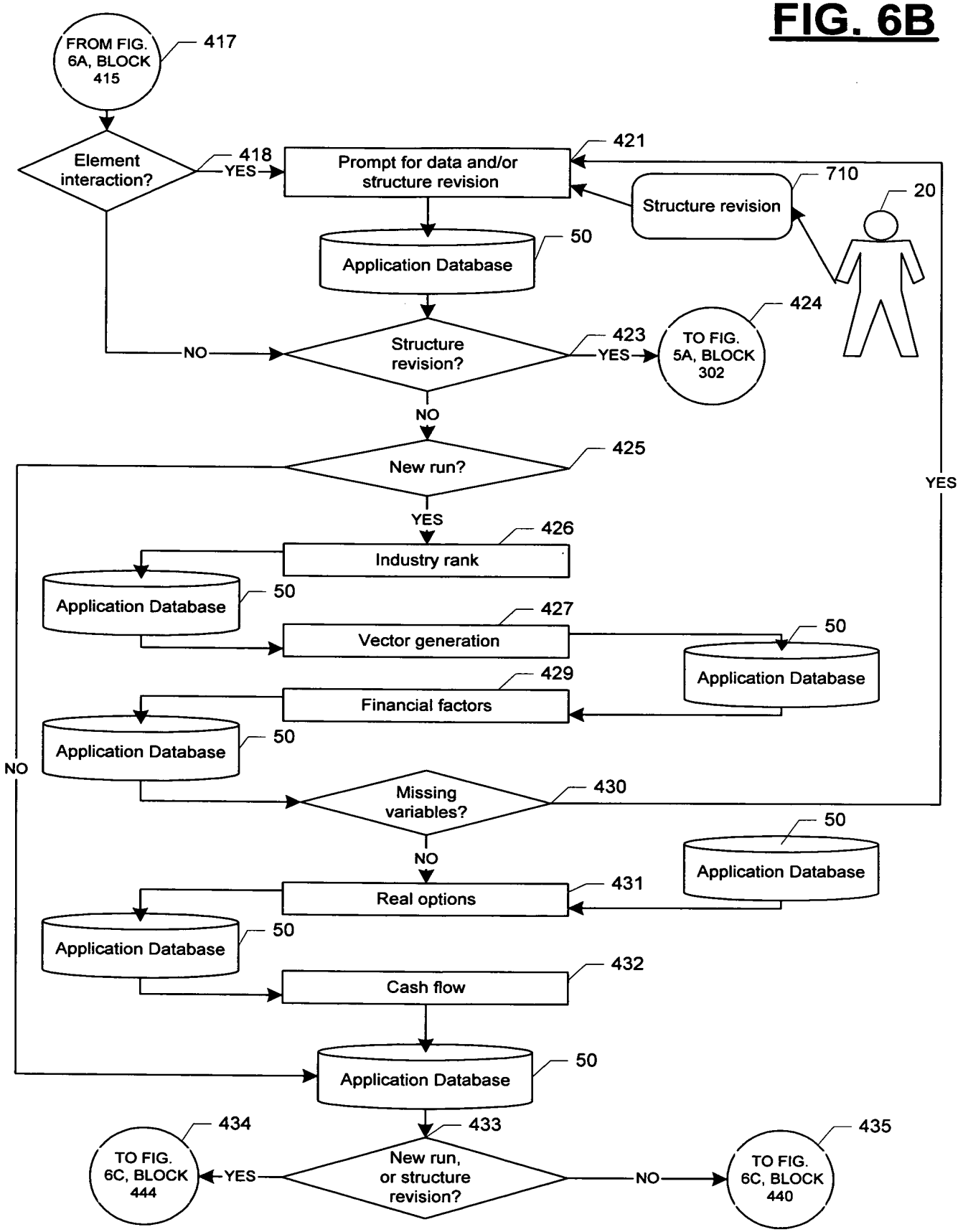

FROM FIG. 6A, BLOCK 415
417
Element interaction?
418
YES
Prompt for data and/or structure revision
421
Structure revision
710
20
Application Database
50
NO
Structure revision?
423
YES
TO FIG. 5A, BLOCK 302
424
NO
New run?
425
YES
YES
Industry rank
426
Application Database
50
Vector generation
427
Application Database
50
Financial factors
429
Application Database
50
NO
Missing variables?
430
NO
Application Database
50
Real options
431
Application Database
50
Cash flow
432
Application Database
50
New run, or structure revision?
433
YES
TO FIG. 6C, BLOCK 444
434
NO
TO FIG. 6C, BLOCK 440
435

FIG. 6C

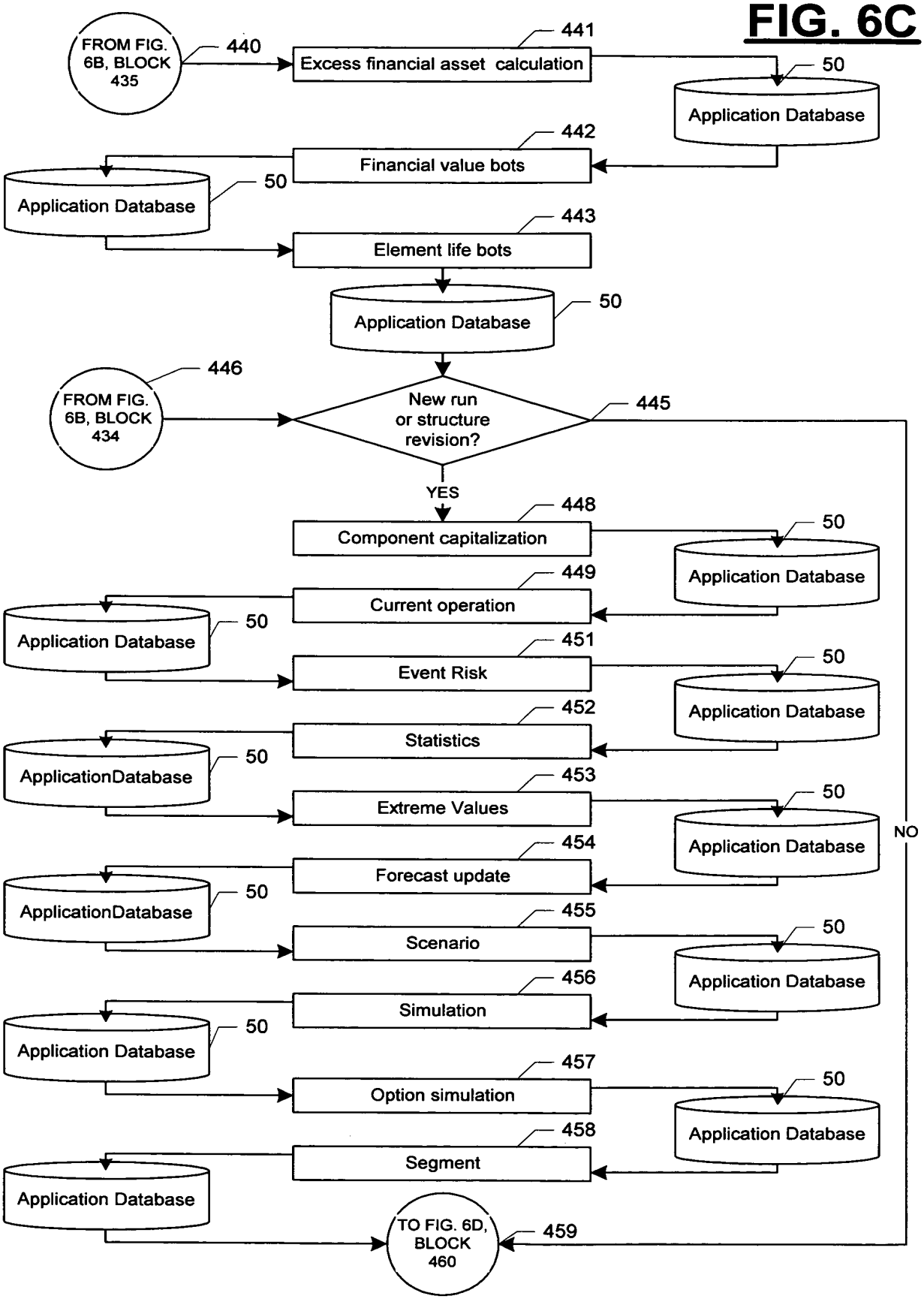

FROM FIG. 6B, BLOCK 435
440
Excess financial asset calculation
441
50
Application Database
Financial value bots
442
Application Database
50
Element life bots
443
Application Database
50
FROM FIG. 6B, BLOCK 434
446
New run or structure revision?
445
YES
NO
Component capitalization
448
Current operation
449
Event Risk
451
Statistics
452
ApplicationDatabase
Extreme Values
453
Forecast update
454
Scenario
455
Simulation
456
Option simulation
457
Segment
458
TO FIG. 6D, BLOCK 460
459

FIG. 6D

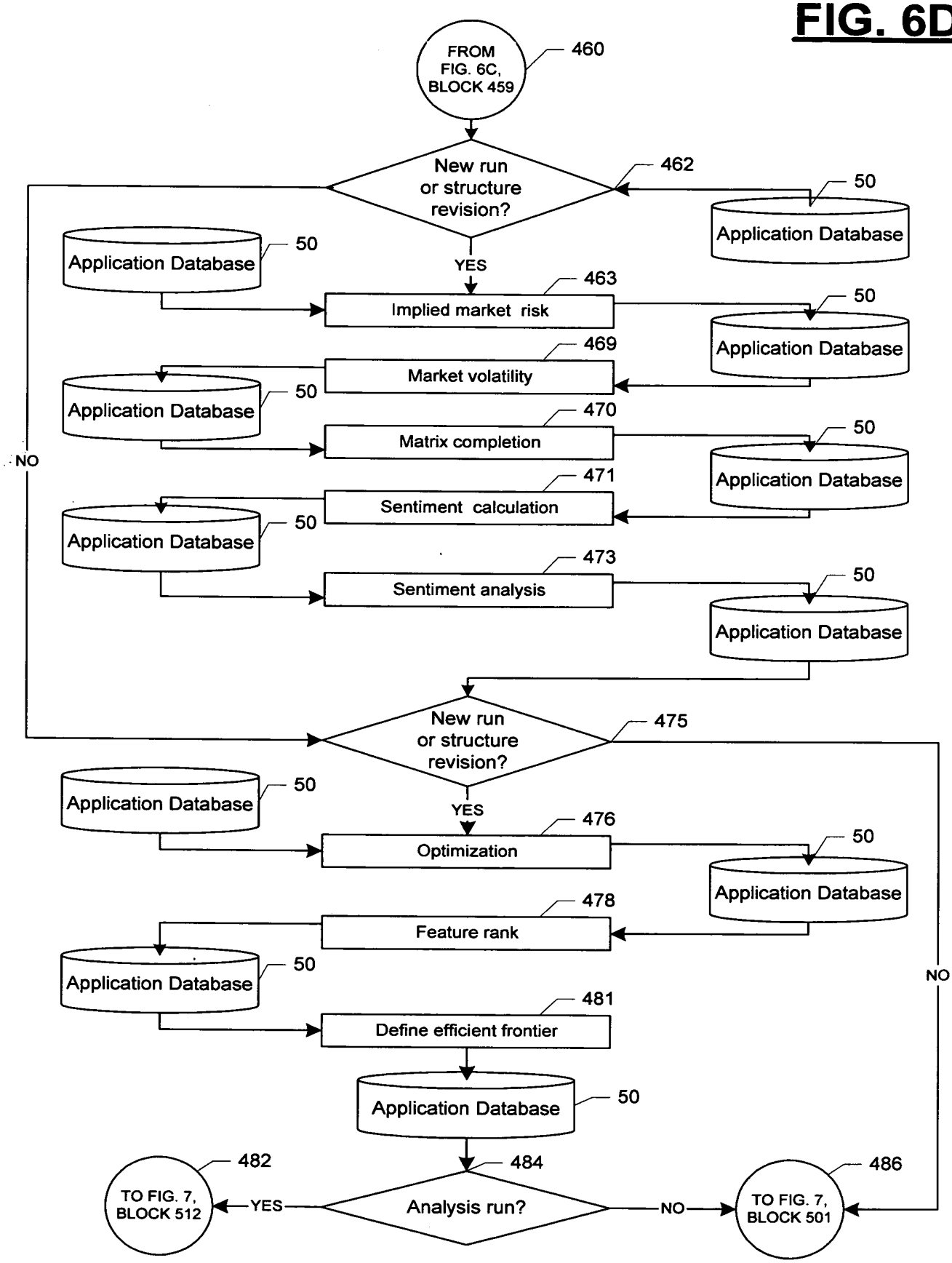

FROM FIG. 6C, BLOCK 459
460
New run or structure revision?
462
YES
NO
Application Database
50
Implied market risk
463
Market volatility
469
Matrix completion
470
Sentiment calculation
471
Sentiment analysis
473
New run or structure revision?
475
YES
NO
Optimization
476
Feature rank
478
Define efficient frontier
481
Application Database
50
Analysis run?
484
YES
NO
TO FIG. 7, BLOCK 512
482
TO FIG. 7, BLOCK 501
486

FIG. 7

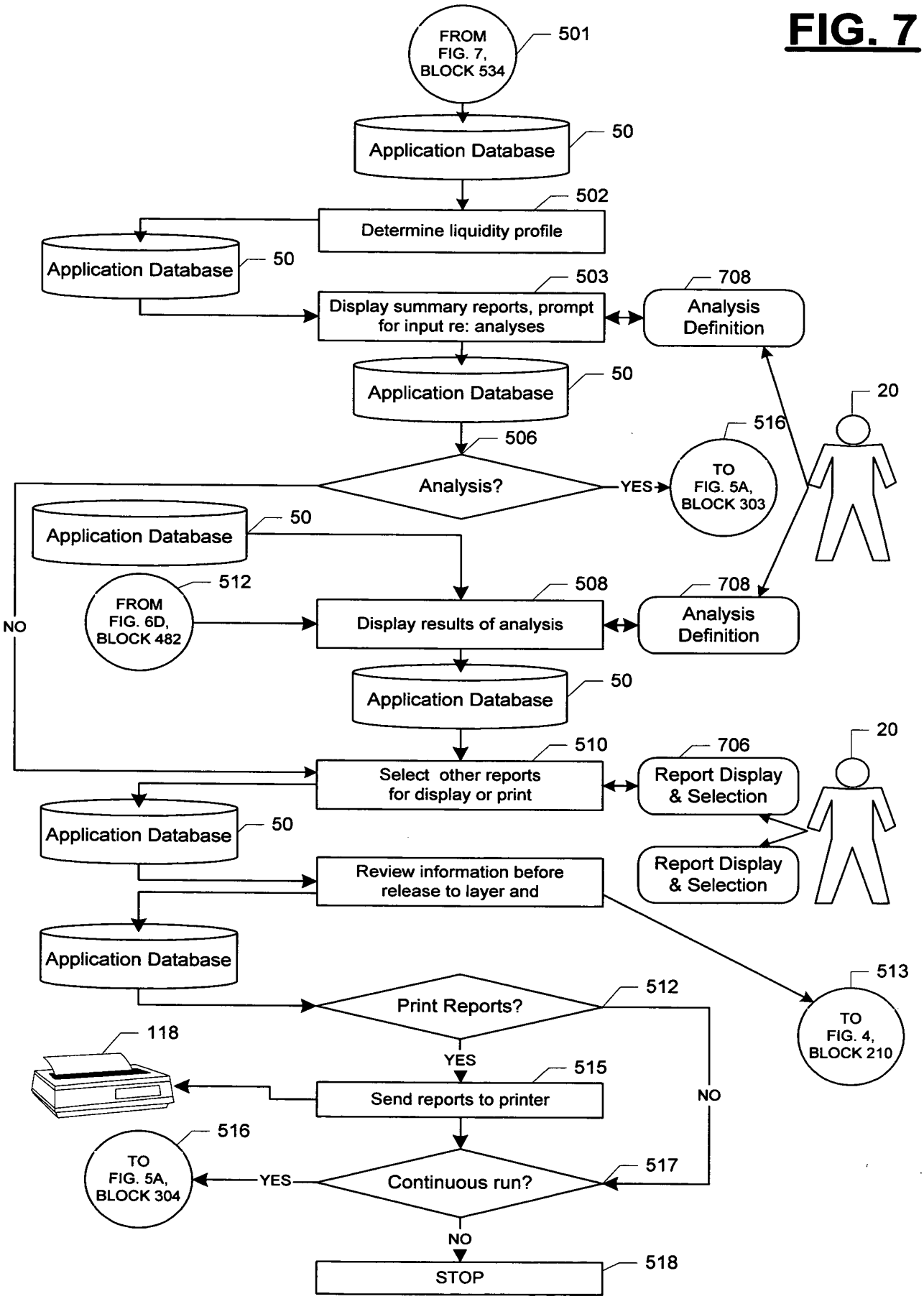
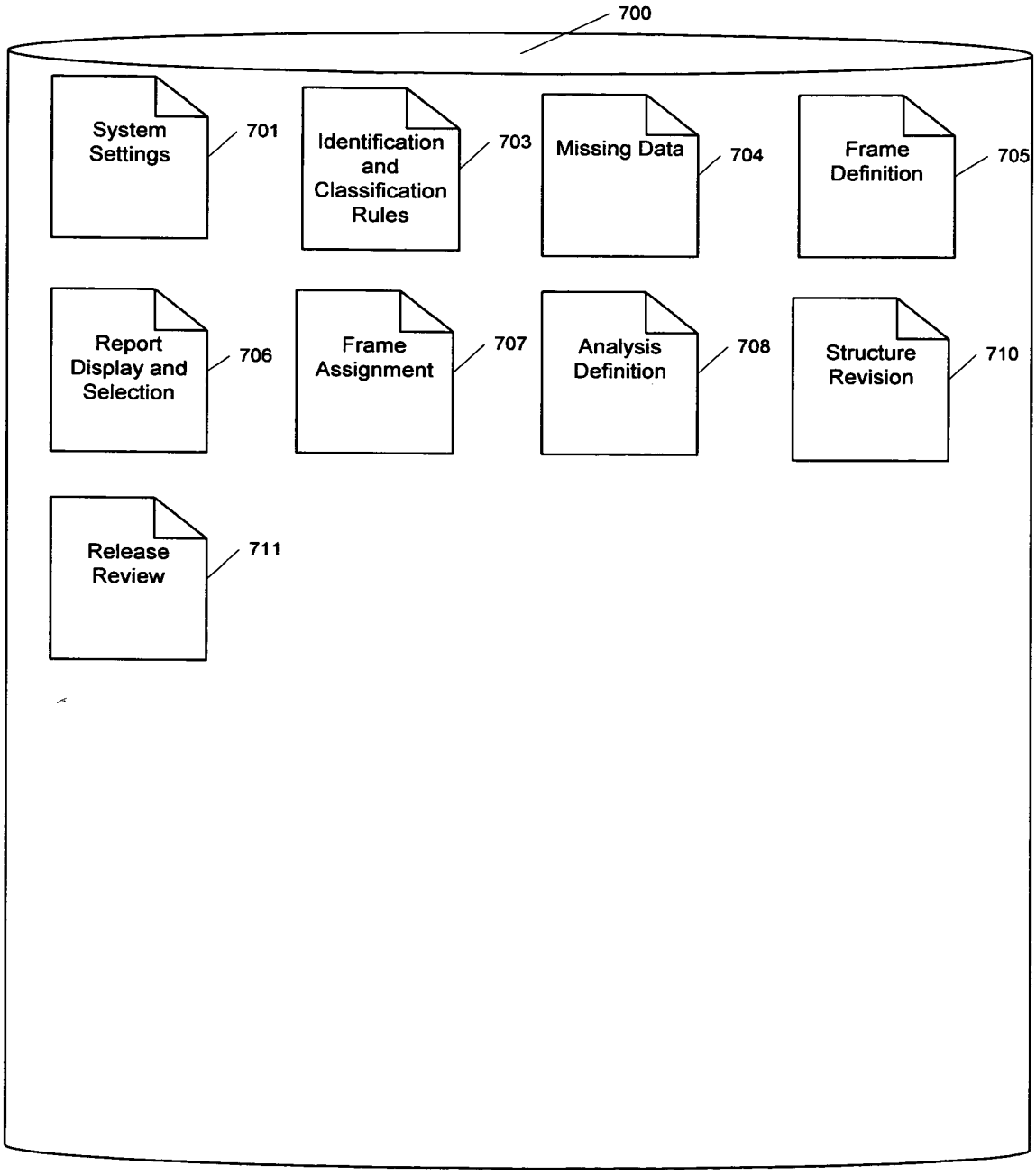

FROM FIG. 7, BLOCK 534
501
Application Database
50
502
Determine liquidity profile
Application Database
50
503
Display summary reports, prompt for input re: analyses
708
Analysis Definition
Application Database
50
20
516
506
Analysis?
YES
TO FIG. 5A, BLOCK 303
Application Database
50
512
FROM FIG. 6D, BLOCK 482
508
Display results of analysis
708
Analysis Definition
NO
Application Database
50
20
510
706
Select other reports for display or print
Report Display & Selection
Application Database
50
Report Display & Selection
Review information before release to layer and
Application Database
513
TO FIG. 4, BLOCK 210
Print Reports?
512
118
YES
515
Send reports to printer
NO
516
TO FIG. 5A, BLOCK 304
YES
Continuous run?
517
NO
STOP
518

FIG. 8


700
System Settings
701
Identification and Classification Rules
703
Missing Data
704
Frame Definition
705
Report Display and Selection
706
Frame Assignment
707
Analysis Definition
708
Structure Revision
710
Release Review
711

Organization Risk Matrix FIG. 9

Enterpris 1	Current Operati n	N t R al Options	Investments	Derivativ s	Market Sentiment
Elem nt f valu 1					
Elem nt Variability	(X)	(X)			
Event Risk	(X)	(X)			
Factor Variability	(X)	(X)			
Strategic Risk	(X)	(X)			
Total Risk:	(X)	(X)			
Element of value 2					
Element Variability	(X)	(X)			
Event Risk	(X)	(X)			
Factor Variability	(X)	(X)			
Strategic Risk	(X)	(X)			
Total Risk:	(X)	(X)			
Going Concern Value					
Element Variability	(X)	(X)			
Event Risk	(X)	(X)			
Factor Variability	(X)	(X)			
Strategic Risk	(X)	(X)			
Market Sentiment Risk	=	=			
Total Risk:	(X)	(X)			

+

Enterprise 2	Current Operation	Net Real Options	Investments	Derivatives	Market Sentiment
Element of value 1					
Element Variability			(X)	(X)	(X)
Event Risk			(X)	(X)	(X)
Factor Variability			(X)	(X)	(X)
Strategic Risk			(X)	(X)	(X)
Total Risk:			(X)	(X)	(X)
Element of value 2					
Element Variability			(X)	(X)	(X)
Event Risk			(X)	(X)	(X)
Factor Variability			(X)	(X)	(X)
Strategic Risk			(X)	(X)	(X)
Total Risk:			(X)	(X)	(X)
Going Concern Value					
Element Variability			(X)	(X)	(X)
Event Risk			(X)	(X)	(X)
Factor Variability			(X)	(X)	(X)
Strategic Risk			(X)	(X)	(X)
Market Sentiment Risk			=	=	(X)
Total Risk:			(X)	(X)	(X)

=

Organization	Current Operation	Net Real Options	Investments	Derivatives	Market Sentiment
Element of value 1					
Element Variability	(X)	(X)	(X)	(X)	(X)
Event Risk	(X)	(X)	(X)	(X)	(X)
Factor Variability	(X)	(X)	(X)	(X)	(X)
Strategic Risk	(X)	(X)	(X)	(X)	(X)
Total Risk:	(X)	(X)	(X)	(X)	(X)
Element of value 2					
Element Variability	(X)	(X)	(X)	(X)	(X)
Event Risk	(X)	(X)	(X)	(X)	(X)
Factor Variability	(X)	(X)	(X)	(X)	(X)
Strategic Risk	(X)	(X)	(X)	(X)	(X)
Total Risk:	(X)	(X)	(X)	(X)	(X)
Going Concern Value					
Element Variability	(X)	(X)	(X)	(X)	(X)
Event Risk	(X)	(X)	(X)	(X)	(X)
Factor Variability	(X)	(X)	(X)	(X)	(X)
Strategic Risk	(X)	(X)	(X)	(X)	(X)
Market Sentiment Risk	=	=	=	=	(X)
Total Risk:	(X)	(X)	(X)	(X)	(X)

* not : when displayed each X is r plac d by a value in the base currency

FIG. 10

Market Value Matrix

Enterprise 1

	Current Operation	Net Real Options	Investments	Derivatives	Market Sentiment
Element of value 1					
- Base value	X	X			
- Total Risk	(X)	(X)			
- Net value	X	X			
Element of value 2					
- Base value	X	X			
- Total Risk	(X)	(X)			
- Net value	X	X			
Going Concern					
- Base value	X	X			
- Total Risk	(X)	(X)			
- Net value	X	X			

+

Enterprise 2

	Current Operation	Net Real Options	Investments	Derivatives	Market Sentiment
Element of value 1					
- Base value			X	X	X
- Total Risk			(X)	(X)	(X)
- Net value			X	X	X
Element of value 2					
- Base value			X	X	X
- Total Risk			(X)	(X)	(X)
- Net value			X	X	X
Going Concern					
- Base value			X	X	X
- Total Risk			(X)	(X)	(X)
- Net value			X	X	X

=

Organization

	Current Operation	Net Real Options	Investments	Derivatives	Market Sentiment
Element of value 1					
- Base value	X	X	X	X	X
- Total Risk	(X)	(X)	(X)	(X)	(X)
- Net value	X	X	X	X	X
Element of value 2					
- Base value	X	X	X	X	X
- Total Risk	(X)	(X)	(X)	(X)	(X)
- Net value	X	X	X	X	X
Going Concern					
- Bas value	X	X	X	X	X
- Total Risk	(X)	(X)	(X)	(X)	(X)
- N t valu	X	X	X	X	X

* note: wh n di play d ach X is replac d by a value in the bas currency

FIG. 11

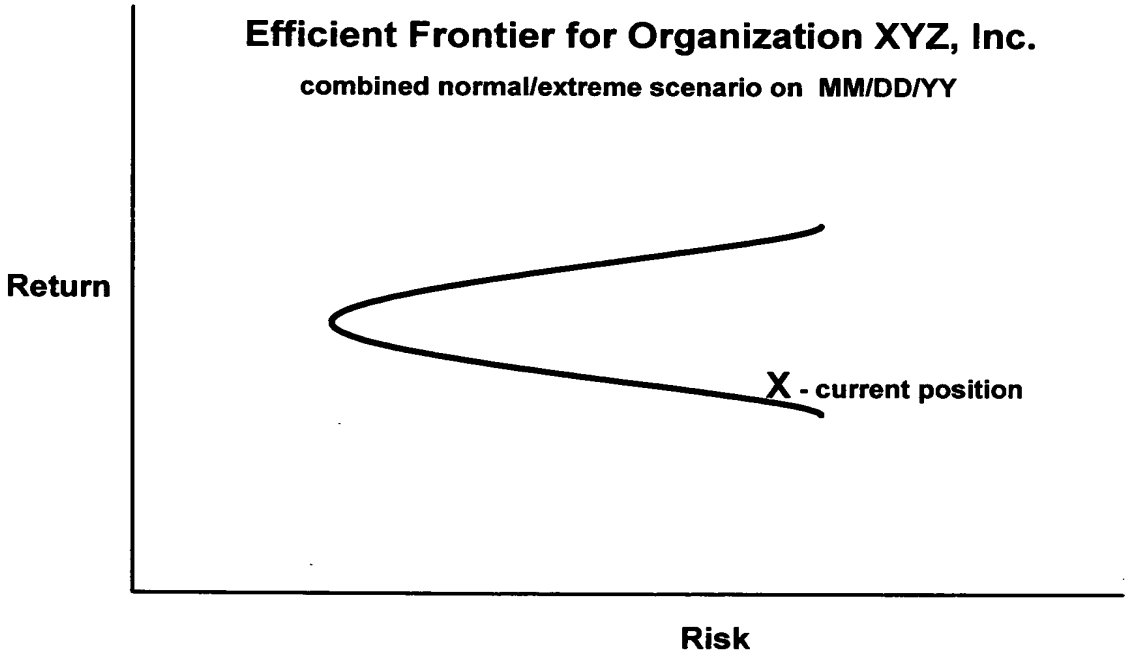


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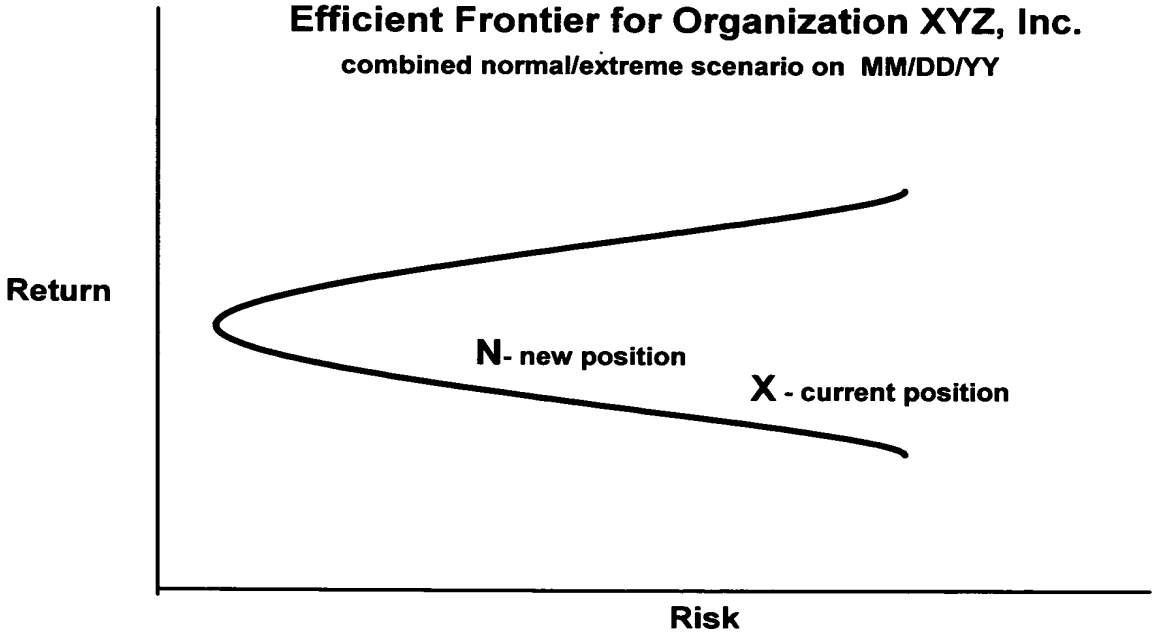
FIG. 12



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